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Professor Brown's Retirement.

By far the best report of the proceedings at the recent meeting of Council of the Royal Agricultural Society appeared in *The Live Stock Journal*. We unfortunately took ours from *The Times* and thus missed a most important remark in the Duke of Richmond's speech. His Grace said: "Professor Brown's impending retirement under the rules of the public service had been known to the Board of Agriculture since the beginning of last year, but they had not yet heard of any person being appointed as his successor." The force of this remark will be more clearly understood if we remind our readers that Professor Brown reached the age limit, at which officials in the Civil Service are compulsorily retired, nearly fourteen months ago, and that only a special arrangement *for one year* prolonged his appointment to December 31st, 1893. During the whole of last year the department knew what they had to face, and yet this important matter has been allowed to drift into a muddle which may any day develope into a serious catastrophe.

After the Duke of Richmond had relieved his mind on the subject of the Board's remissness, and added some very complimentary remarks on the present veterinary officers, Professor Brown rose to thank the speakers who had censured the Board of Agriculture but praised the veterinary officers, and he made this very curious statement "So far as the question of his retirement and the future arrangements of the Veterinary Department were concerned, it would not be desirable that he should say anything more than this, which he was authorised to say, viz., that the whole question of his retirement and of his future connection with the Board of Agriculture was under consideration."

This was certainly a very remarkable statement; it expressed exactly the fact which the Duke of Richmond had been deprecating, and it suggested that Professor Brown was quite willing to accede to some arrangement which would prolong or perpetuate the existing mischief. Professor Brown is surely not indispensable—no man is—and if he be reinstated at the Board in such a manner as to permit the non-appointment of another veterinary adviser, he will be guilty of an injustice to his profession and he will have assisted in the making of a position which a few years will show to be insupportable.

There is work at the Board for three, if not four, veterinarians, but no man can go there as a novice and grasp at once all the details of the official machinery. Only by months or years of experience in the department can any officer fit himself for the responsibility of chief adviser, and if promotion is now to be stopped, the day will arrive when the office will contain only new men, unaccustomed to the work, and entirely ignorant of all the details of success and failure which form so essential an element in the education of every man to his special vocation. It is grossly unfair that the promotion of junior officers should be delayed by the unnecessary prolongation of the services of seniors. Promotion, with the increased position and pay which it affords, is one of the few attractions which may induce some of our best men to enter the veterinary department of the State. The junior officers are now paid on a contemptible scale, and if after sacrificing a life-time for such remuneration their legitimate ambition is to be baulked, the Board of Agriculture may depend upon it that only third-rate men will in future accept their veterinary appointments.

Professor Brown may well rest satisfied with the laurels he has obtained. He is Principal of the Royal Veterinary College, Veterinary Adviser to the Royal Agricultural Society, and to the Bath and West of England Agricultural Society. He is Veterinary Editor of the Field, an Author, and a tolerably regular contributor to Magazines. There cannot be much time to spare for the Board of Agriculture, and it would be a graceful act on his part to decline to stand in the way of the men who he would be the first to acknowledge have shared very equally with him the burdens and responsibilities of the office.

Professor Brown's definite retirement, and the promotion of his late colleagues, is the only right course for the Board of Agriculture to adopt. It would give satisfaction to the stock-owners of the Kingdom and to the veterinary profession. It would re-establish a confidence in the Board which it would be idle to deny has been sorely shaken, and it would ensure to the country the continued services of men thoroughly trained to their duties.

Colic.

It is not unusual to hear complaints made that veterinary practitioners, at meetings and in clinical reports, devote an extra amount of earnestness and attention to colic. It is implied that the subject is too common and too well known to merit so much attention, and that we might be better employed in trying to elucidate some more novel and erudite subject.

Colic means simply abdominal pain, unles we qualify the term by some addition that limits its meaning to pain proceeding from intestinal disturbance; but even in its narrower sense the word comprehends a number of conditions that are far from being clearly understood. Nothing is more difficult than to differentiate the exact portion of the intestinal canal affected—unless it be to form a definite opinion as to the condition existing at the part. Out of twenty fatal cases of "colic," not more than two or three present the same post-mortem appearances, but when symptoms and lesions are compared every case is instructive.

In cases where the obstruction proves to be mechanical it is a shock to the feelings of a sensitive practitioner to remember the aloes and physostygmine he has administered; it is also irritating to find, after a long course of opiates and atropine, that the only abnormal condition is a colon crammed with ingesta. As an aid to diagnosis we fancy that during life rectal exploration might be more largely and usefully employed; that after death, examination of the abdominal contents should *never* be neglected. There are some practitioners who never have a fatal case of colic but they make a post-mortem examination, and the correctness of the diagnosis of these men should be a lesson to the more negligent of us.

CASES AND ARTICLES

STOMACH TYMPANY IN THE HORSE.

By Vety.-Captain F. Smith, Aldershot.

When the amount of gas in the stomach exceeds that which the organ is capable of holding comfortably it produces pain. I am certain that all our colic cases are not intestinal, though I cannot say how many are intestinal and how many stomachal.

The amount of gas in the stomach is not, as a rule, very great, for the reason that those substances which are the chief gas producers are not acted upon in the stomach or only to a moderate extent. I allude to cellulose, the digestion of which is principally intestinal.

It would be interesting if one could determine the relative frequency with which the stomach, small intestines, and large intestines are affected with colic; at present we can do little but conjecture.

My impression is that the largest number of colic case are referable to the large intestines, and the smallest number to the stomach, but I must confess that the basis of this opinion is far from satisfactory.

I am not clear what it is that causes the pain in colic. If bowels are blown out with gas to bursting point the cause of pain is not difficult to understand, but what is it which produces that spasmodic contraction of the intestinal track which we speak of a colic? Indigestion is an excellent word conveying a great deal and expressing nothing, and yet we are forced to use it as implying what we know does occur, though the exact changes in the process are quite unknown to us. We do not know whether they are chemical or mechanical; whether the digestive secretions have failed to supply sufficient material or too much; whether the ingesta is hurried through the canal too rapidly or has been lying there too long; or whether, as the result of the breaking down of the food substances in the canal, under the influence of digestive ferments, poisonous substances are produced, the specific action of which are on the involuntary muscle of the bowel.

All this is speculation, and is only indulged in as exhibiting the big problem which has yet to be solved in connection with colic production, and my bias is that this problem must be solved by chemistry. Here is a common fact:—A horse has for years been fed on the same food, lived under practically identical conditions, performed about the same amount of work daily, and, as far as possible, one day of this animal's life is a counterpart of all the days which preceded it, and one year is identical with another. This horse suffers from an attack of colic, there being no alteration in the stable management, watering, feeding, or, so far as one can tell, nature of the food to account for it, and moreover he never suffered before. *Problem.* Define the cause?

Take another example:—A case of colic has occurred amongst a body of horses living under identical conditions, the food is not quite above suspicion, but though all the animals have been receiving it only one has suffered. We consider the quality of the food to blame, but why did not more horses suffer if this was really the cause?

The fact is indigestion as applied to horses requires working at from its chemical and bacteriological side, and until this has been done we can only go on guessing. The whole gastro-intestinal canal is a vast culture tube, the medium being acid, neutral and alkaline in reaction; fluid or comparatively solid in consistence, and offering the finest possible opportunity for chemical or animal products or both to be generated.

To revert to the original subject of tympany of the stomach. This disease I recognise in an acute and subacute form, it arises from *indigestion*; gas is formed in quantities which distends the coats of the viscus to bursting point (acute tympany), or as it forms it is passed into the bowel or into the œsophagus so long as fermentation is occurring (sub-acute), producing pain but nothing so acute as in the first variety, for the reason that the gas is not imprisoned. It is the same disease, the varieties being simply a question of degree.

Acute tympany I can recognise post-mortem by a rent in the wall of the stomach. I have diagnosed it during life on one or two occasions, the diagnosis being verified by post-mortem examination, the stomach being intact but enormous in size. Perhaps the word diagnosed is not strictly accurate; guessed would probably be a more appropriate word, for I hold that all our gastro-intestinal diagnoses are guess work, and I doubt if they will ever be anything else until we are capable of determining that a regular set of symptoms accompany a certain lesion and none other, and this will never be determined. In chest disease it is the physical symptoms which admit of the great niceties in diagnosis being made, not the general symptoms exhibited by the patient, and until something for the diagnosis of intestinal affections can be found, comparable with auscultation in chest disease, so long will we continue to guess. When I read of symptoms which are regarded as invariably accompanying an intestinal or stomach trouble, I have no difficulty in calling to mind cases where no such symptoms were shown. Some years ago a gentleman stated that when a coil of distended small intestine could be felt in the pelvis on rectal exploration that horse had a twist. On the strength of that remark I shot a horse which had been in acute pain for several hours, and on making my post-mortem examination I found nothing but a large mass of ingesta, about the size of a double fist, trying to make its way along, I think, the single colon. I always blamed myself for the death of that horse, and I did not hold the expounder of this reliable (?) symptom as free from blame.

Our nearest approach in abdominal work to the exactness obtained in chest trouble by auscultation, is in rectal exploration.

As to the symptoms of acute tympany of the stomach I have nothing to add to those I described eleven years ago.*

"We have nothing in the early symptoms that I am aware of which distinguishes this affection from

* "Quarterly Journal of Veterinary Science in India" vol. 1., p. 358.

ordinary colic; the horse is seized with abdominal pain which continues to get worse, and tympany becomes apparent. The pain suffered is now simply awful, the unfortunate animal is bathed in sweat, the greatest difficulty experienced in keeping him on his legs, the pulse weak almost imperceptible, respirations frequent, conjunctiva usually injected; rectal examination generally reveals the larger bowels distended, the head of the cœcum occupying the pelvic cavity; the pulse makes no improvement, and the respirations are shorter or even double at the flank." Up to this point there is nothing remarkable in the symptoms to distinguish it from an ordinary case of violent colic, except it be the peculiarity of the respiration and this is no doubt brought about by the tympany.

"The tympany increases and is now plainly seen to *be under the ribs*, well forward in fact; the animal may now stand persistently with the elbows turned out, a gurgling sound is heard in the œsophagus due to eructation of gas, followed perhaps by vomiting."

I lay great stress on this tympany under the ribs, for once seen it cannot be forgotten; unfortunately it cannot always be seen, for if the bowels are very distended with gas the whole abdomen is inflated, but in those few cases where the tympany is practically confined to the stomach, the rear ribs bulge in a remarkable manner as the stomach increases in size.

If these cases die the stomach is either ruptured or not. I have found the organ so distended with gas as to occupy the greater part of the cavity of the abdomen. I have seen a stomach the circumference of which at its long axis was over five feet, and three feet in circumference at its short axis. The volume of the organ is so great that to prevent the viscus being ruptured I have had to employ two men to remove it from the abdomen, in fact it looked more like the stomach of an ox than that of a horse.

Acute tympany of the stomach is therefore nothing more than the distension of a stomach, the walls of which are sufficiently strong to withstand bursting. The condition has been repeatedly described in the old numbers of *The Veterinarian*, and Percivall, with his usual accuracy gives an account of the disease.

The exit of gas from the stomach can only occur upwards through the œsophagus, or backwards through the duodenum; the former outlet, for physiological and anatomical reasons, is almost invariably closed, the latter outlet will work satisfactorily so long as the duodenum is an open tube, and the bowels capable of holding more gas.

The duodenum unfortunately is often a closed tube, the closure being brought about mechanically by the compression to which it is exposed by distended intestines. To appreciate this we have only to bear in mind the peculiar course of the bowel close to the stomach, and the direction the intestine takes until it crosses the spine. The duodenum runs upwards towards the middle of the last rib on the right side, in its course to this rib it lies between the right lobe of the liver and the double colon; as gas accumulates in the colon the bowel bulges forward and presses against the liver and diaphragm; owing to the compression of the duodenum between the liver and colon the intestine becomes closed, and the gas in the stomach goes on accumulating until the coats are rent.

It is quite certain that one line of treatment we should adopt is to keep the large bowels emptied of the gas they contain, and so open communication with the stomach, and for this purpose and that of relieving pain, puncturing the bowels should be performed.

If it is possible to tackle the disease from the œsophagus, mechanical dilatation of the cardia is required to admit of vomiting or eructation. I have described an instrument for this purpose, but time and opportunity are required to demonstrate its value or uselessness.

The introduction of agents into the stomach for the purpose of absorbing the gases produced is a rational method of procedure. The gases in largest amounts are CO_2 and Marsh Gas. Under normal conditions this latter gas is confined almost wholly to the large intestines. There is no absorbent for Marsh Gas, but CO_2 may be rapidly absorbed by dilute Liq. Potassæ or Lime Water; the latter would doubtless be the safest to use, though the action of the former is more complete and rapid.

I have not touched on the more obvious methods of treating such cases, but for the relief of abdominal pain I know of nothing to be compared with hot rugs.

Our stomach cases run as a rule a rapid course, and we often only see the patient when it is evident that rupture has already occurred.

Sub-acute tympany of the stomach is a much more manageable disease, the symptoms are those of usual abdominal pain not very severe, but in addition there is a gurgling noise in the œsophagus and eructation of gases. The gurgling is most peculiar; it is at first a low sound evidently proceeding from the depths of the animal's interior, it comes nearer and nearer the surface, the eye involuntarily following it forward, and then up the neck, until it gushes at the nostrils, sometimes with such violence as to cause the nostrils to vibrate and even to alarm the horse. The ear applied over the œsophagus gives every indication of what is occurring, and sounds may be heard over this tube which would otherwise be inaudible.

A horse exhibiting these symptoms will certainly not die from a ruptured stomach, in fact I have never seen such a case terminate in death, for nature is performing her own cure.

I can only distinguish between acute and sub-acute stomach tympany by the intensity of the symptoms, and abdominal tympany; the latter is trifling or even absent in the sub-acute form of the disease.

In the treatment of these cases the alkaline method previously described is most beneficial, and in addition I assist the expulsion of gas by pressure over the abdominal ribs; two men on either side working together and rhythmically compressing the ribs towards the centre line of the body. This pressure acts on the stomach, and it is surprising the amount of gas which may be pumped out. The remaining line of treatment requires no notice from me.

IMPACTION OF COLON WITH SAND.

By Walter Western, M.R.C.V.S., Bracknell.

Subject a roan cart mare, 7 months pregnant, which had been recently suffering from frequent attacks of colic more or less severe.

I saw her on Monday Feb. 5th, about 9 o'clock in the evening, but I might add that she had been brought in from work suffering, at 10 o'clock in the morning.

There is perhaps no need to enter into details of the treatment but simply to remark that the ordinary treatment consistent with stoppage of the bowels was resorted to. The patient was in incessant pain, but never appeared in great agony. She lived just about 48 hours from the first indication of trouble. The pulse at first was 50, which gradually increased in number to 100 when it became almost imperceptible.

The autopsy was somewhat interesting, inasmuch as I could not feel satisfied in attributing death to ordinary stoppage. On opening the abdomen nothing of a striking character presented itself, but on opening the double colon we found at one end fully a gallon and a half of coarse sand, whilst the other portion was impacted with well masticated food, which was almost as dry as the usual contents of the omasum of the cow, whilst the mucous membrane of the colon was intensely inflamed. During the summer the mare had been pastured on the hill and is believed to have been somewhat deprived of sufficient water supply, and it is just possible that she may have become possessed of the sand in this manner.

Perhaps other practitioners have experienced a similar case.

A CASE OF SCROTAL HERNIA.

On Friday morning, the 9th inst., I was requested to attend a 19 year-old cart horse. On examination the animal showed slight abdominal pain, and the horsekeeper informed me that he had been found in great agony the first thing, but was easier now. Pulse about 50, and strong. Temp. 101, breathing rather short, anxious look about the face, membranes highly injected—too highly congested in relation to the other symptoms. I was told that he was a *rig*, and on examining the scrotum found a hard swelling which I had my doubts about, but they still maintained that he was a rig. I gave a small dose of aloes and a subcutaneous injection of morphia. On calling in the afternoon I found the animal tympanitic and was told that he had been vomiting. The other symptoms were about the same, the pulse rather smaller; gave enema which the animal ejected immediately and strained very much. On attending about nine in the evening I found the animal in about the same condition, it had passed nothing nor partaken of anything, but had been quiet since my last visit. Auscultation of the abdomen failed to disclose the slightest movement, tympany very great. I expressed the opinion that death would not be long delayed, and I stayed with him until 12.10 when he dropped down and gave a few gasps and died.

Post-mortem. On attending at the knackers' yard they had removed the sheath, which was greatly swollen and contained a portion of strangulated small intestine. This was the so-called "rig" and I shall in future know better than to allow myself to be guided by any statements of owners or attendants. On opening the abdomen I found a great quantity of liquid and food which had apparently escaped from the stomach which was ruptured.

Now I will endeavour to analyse the symptoms and post-mortem, and perhaps more capable pens than mine will point out any errors. The animal first of all presented colicy pains due to strangulated scrotal hernia. Fermentation going on in the bowel caused the tympany, and the strangulated hernia not allowing the gases to pass through the rectum, distended the bowels and stomach to such an extent that the cardiac opening allowed the contents of the organ to pass into the œsophagus. Then we had the vomiting and finally the rupture of the stomach which was the direct cause of death. This case may, I hope, through your columns put young men like myself on their guard against accepting what is told them as correct. Had I not been misled by the assertion that the horse was a "rig" I might have adopted measures for the reduction of the hernia, and perhaps might have saved the life of the poor old animal.

D.Y.D.

THE CARLISLE INHALER.

This paper is directed to those who employ the Carlisle inhaler with a view of converting them to other and better opinions. It is not addressed to those who, like myself, are already aware of its dangers, for their opinions are so tenacious that it would be as if the Society for the Propagation of the Gospel were to devote its attention to the clergy of the Church of England (St. James). The interesting papers and discussions upon the subject of anæsthesia at the National, and from time to time in other Societies, have—notably as to the dangers connected with this inhaler and its proper use—certain voids in the matter of proof, which I, not being an authority, have long hesitated to attempt to fill. For "statements and affirmations are insecure foundations for scientific truths; objective observations and objective proofs are required" *(Lancet.)* It is only after waiting for some months, in the vain hope that a properly qualified expert would move, that I venture, with some hesitation to submit the following to your readers. Hence, in the course of my arguments I shall never omit to quote an authority for my more controversial statements, whenever I can produce one. Chloroformists are divided into the genuine and the spurious. The genuine administer the vapour on a sponge, under a towel or in an old hat. The spurious use some kind of a muzzle, almost invariably the Carlisle. The latter are termed spurious because the vapour thus given is not pure chloroform, being partly chloroform and partly carbonic acid gas. For "a man who be-

comes unconscious from drinking beer cannot be said to be properly drunk, because beer is not pure alcohol" (Pfliffski). Following the opinions of the great authorities, I will divide the stages of narcosis into 1st excitement, 2nd operation stage, 3rd death; but some observers have noted in the first stage, death; in the 2nd, excitement of the owner; in the 3rd, an operation stage (p.m.) for the chloroformist. (Dratim and Edidi.)

Chloroform narcosis is so replete with dangers that it behoves the operator to prepare himself as well as his patient. For this purpose it will be found that a careful perusal of the many deaths due to chloroform in man and animals, overnight, if accompanied by a suitable number of strong pipes, opens the eesy wonderfully to the detection of any little complication that may occur the following day. A beginner may be recommended to select as his first case a nervous thoroughbred worth about £300; they, as a rule, afford the best practice. But failing such, a badly broken-winded family treasure may be chosen, if the lady owner can be induced to see the chloroform administered.

The chloroformist having selected his case and prepared it with a good feed, will find himself confronted with the question as to how he is to use the Carlisle, for he may have the horse in the standing position or prone; and if prone, he can use the inhaler in two ways.

The standing position. Take the animal into a meadow; fix the tray etc. of the inhaler in its proper position and pour the chloroform on to the sponge from the top. Remove the ordinary bridle and slip the muzzle with straps complete on to the horse's head. The advantages claimed for this method are: there is plenty of fresh air in the meadow; the animal by careering around increases his circulation and hastens the absorption of the vapour; the risk of broken backs—by hobbling—is avoided.

I cannot speak personally of the value of the method, not having practised it; but I understand that its employment is somewhat curtailed by the difficulty in finding meadows of the necessary size.

First prone method. As I have already indicated I am an opponent of the Carlisle: at the same time I recognise that I cannot convert anyone to my views unless I act in the spirit of fair play. I have carefully collected all the strongest points of this method, but inasmuch as none are perfect, all of us do not use *all* the strong points which I describe in this method, which combined, represent ideal perfection.

The prone method not being as simple as the standing one necessitates that the chloroformist should arm himself with certain apparatus and drugs to be held ready for untoward circumstances. He must, therefore, provide himself with a thermometer and a barometer, a hypodermic syringe, two phlebotomy knives, a galvanic battery, ether, nitrate of amyl, 5lbs. of ice, several buckets of ice-cold water, and an artificial respirator.

The Operation. The animal is cast and secured in the usual manner, on the left side, if possible, because the weight of the body tends to assist the heart and the lungs. The bridle is removed and replaced by the inhaler complete (except the chloroform) care being taken that the tray is properly secured in its place by the buttoning of the lid, etc. The straps of the headpiece are now pulled through their buckles as tightly as possible, while two assistants push energetically at the bottom of the muzzle in order that the horse may have the full benefit of the chloroform when the proper time comes. A powerful assistant now seizes the strap which surrounds the inhaler and pulls as hard as he can, using the horse's face as a purchace. By these means the animal's nese is firmly fixed at the bottom of the inhaler, and the first stage of anæsthesia is induced in a most satisfactory and economical manner—before the chloroform is given. Some say this is due to CO_2. At any rate there is nothing new in the process, for it has been handed down, the fruit of keen observation ever since anæsthesia was produced in an old hat. Thus, if we closely watch A who wears his headgear in the usual way, we fail to see any signs of narcosis (though they may be present when it is worn jauntily on the back of the head, (Newton & Sheil). But let B suddenly bonnet A, then we immediately observe in A the most violent contortions and excitement, in a word, the first stage of anæsthesia (Julius Naso). This is due to CO_2, and *not* to the fact that A's nose is jammed (N. Longus). Therefore, by tightly forcing the horse's nose to the bottom of the muzzle, we are skilfully applying a well-known fact to a scientific purpose.

The first stage having been thus started, the tray is withdrawn and filled with two or more ounces of chloroform. Let me here remark that when the tray is removed the animal may gasp more or less freely; this is to be considered a most favourable sign, for the more freely the patient inhales, the more satisfactory the result. (D. Alghieri). This is also the case in the human subject. (Koffdrop). The tray is now rapidly replaced and strapped up. The fact that the sponge rarely absorbes more than one ounce of the drug is not a matter of any importance because the remainder will find its way into the nose in a fluid state and rather aid than retard the excited stage. Nevertheless, it it not as a rule advisable, in the longer operations where the chloroform is repeatedly renewed, to allow more than three, at the utmost four ounces of the drug to reach the lungs in a fluid state. (Corneille & Racine Carré).

By this time the patient has generally reached one of the other stages and the practitioner may begin his surgery; but should there still be some delay, an assistant (if he has not done so already) should forcibly tighten the throat lash with one hand and press firmly upon the channel of the neck with the other; thus regulating the blood flow to and from the brain. In man this kind of pressure is alone enough to produce unconsciousness if applied properly. (Garoter). But as a rule, it is sufficient if a heavy man leans firmly on the animal's chest.

Precautions. During the surgical operation it is necessary, for obvious reasons, for the practitioner to leave his work frequently to ascertain the state of the patient's pulse and eyelids: particularly if a large artery has just been divided and the endof it cannot be found. Shock may occur if the pulse be not

taken at this crisis. Immediately the slightest respiratory irregularity is noticed (and if the chloroformist has properly prepared himself he will be forewarned) it is necessary to get into a state of nervous tremour; the inhaler must be wrenched off, cold water dashed on to the head, ice placed in the rectum, ether injected, nitrate of amyl applied, as well as the galvanic battery. The animal will then revive and chloroform may be renewed. But should the symptoms be more serious than usual, the barometer should be consulted; and moreover, three men must seize the horse's tail and raise him completely off the ground, his head will then hang down and his tongue fall out. This is nearly a specific in the human subject (Munkasczi), likewise in the guinea pig (Tungbhoys).

We will now suppose that the surgery is over, and everything has been satisfactory. The hobbles and muzzle must now be removed and a few buckets of cold water dashed onto the horse, and he should be flicked with a towel (this is important). He will then rise, and by tumbling about work off the remains of the chloroform, besides convincing all witnesses that he is not dead.

One word as to the chloroform. As the cheapest is the best, methylic chloroform is frequently used. It should be well mellowed with age and kept in uncorked bottles, because in administering the drug care should be observed to secure a percentage of air. If the bottle is not corked this object is attained. This quality is recognisable by a supernatant oiliness similar to that which clings to a glass of old sherry or a canvassing M.P.

Notwithstanding the ideal perfection of the method described, horses die under chloroform given in Carlisle's inhaler. It naturally follows that the machine is radically bad, and in effect, if your readers have the patience to consider with me its many disadvantages, they will see how dangerous it is.

Let us consider the active agents in Carlisle anæsthesia. First, we have the carbonic acid gas. Many experiments have been carried out with mice, dogs, etc., to ascertain the effects of this agent, and in them as well as in man they generally end in death; and so its effects are very grave. But we must not omit to allow a large diacount for fright, inasmuch as nearly all experiments are made under the restraint of a closed area and animals are easily terrified. This would also apply to the unfortunate man who gets shut up in a coal mine, as we know that people often die of chloroform fright before any chloroform is given. (Snow). It was not until the celebrated "M.S. in the bottle" was discovered near Landor's cottage upon the domain of Arnheim, that a really convincing light was shed upon this intricate subject. The manuscript being in the Anglo-Saxon vernacular, with which I and others are imperfectly acquainted, is somewhat difficult to translate into ordinary prose; but the gist of it is this:—The author, who appears to have been domiciled near a layer of CO_2 similar to that which lines the ground of the Grotto of Dogs, Naples, experimented.

Amongst other work he appears to have plunged one of the corvidœ (selected, apparently, owing to its intelligence, freedom from nervousness, and unconventionality) into the layer of CO_2 to settle this question. It is unnecessary to translate the details; but the Raven (Corvus Corax) was distinctly heard to remark "My soul from out the shadow which is floating on the floor, shall be lifted—nevermore." (Fl: Enidanus and E. A. Poe). This record of vivisection is sufficiently authentic for the Nine Circles; but should any doubts exist, a reference can be made to Fl. Enidanus who is travelling in Northern Italy. The other Poe is unfortunately dead. This experiment confirms two things:—1st, that the corvidœ if suitably stimulated will articulate (Strabo and Pliny); 2nd, that CO_2, apart from all nervousness, is dangerous, in a Carlisle, to horses. But there is yet another element of danger connected with CO_2 in the Carlisle which has not been properly emphasized: I allude to the pressure exercised by the respiratory muscles, which greatly adds to the effect of the gas. In bacteriology this subject has been studied. Soda-water, in some Tropical countries is found to contain millions of germs; but these microbes soon succumb to the combined effects of the CO_2 and of the pressure in the bottles (Hankine). If a germ cannot live under these circumstances how could a horse. The deleterious effects of CO_2 and squeezing is well marked in sight-seeing crowds, and many people faint from these causes. Further, a very simple experiment will prove that without a crowd, the combination produces in mankind a definite train of physiological and pathological phenomena. Thus if an inquirer approach one of the opposite sex so that an interchange of CO_2 takes place, and adds to its effect by squeezing: then, the result is in the male a diagnostic smacking of the lips (*suavium premore*), followed by an umbellar verberatio, and a multinear eruption on the visible cutis; in the female, a facial erythrainosis, followed by nimbiforism and squeaks. (Ferrure, Heumarkt. and Cranbne Street).

Of the chloroform. It is known that mice, rats and cats take chloroform well; to dogs it is dangerous; and in man it is so fatal that, as I have already indicated, people often die without inhaling it. Hence the medicinal law that chloroform is dangerous in direct ratio to the size of the animal (Menteur). This shows how careful we must be with horses. Experiments have not been recorded of elephants, but if this law is worth anything the mere sight of a Carlisle should prove fatal. An important element of danger in the Carlisle has yet to be studied. I refer to the poisonous alkaloids in the expired air: the Leucomaines, the Tonines, and especially the Margarines (Wiffkim and Oatink) I am surprised our chemists have not rectified this omission. In the human subject their effects have been noted for centuries; thus one of Mahomet's earliest successors was known as the "Father of Flies" on account of the potency of his breath.

As to the machine itself. I maintain that it is dangerous to use is, even if the factors already enumerated had no existence. The mere fact of covering a horse's nose is fraught with grave danger. We know that a person who sleeps with his head under the bed clothes, sleeps more heavily than one who does not. Sleep has been described as akin to death, therefore heavy sleep is more deadly. We

know that the consumptive and asthmatical who wind comforters round their faces in foggy weather seldom survive long, which proves that even a porous covering is more or less fatal. And finally, we know that by covering a horse's nose with a nose bag we produce loss of appetite and stercus, etc. (Carman.)

I do not wish to appear prejudiced against the Carlisle, but I must remind your readers of the tannic acid of the leather, the tin in the tray, the holes in the sponge, all of which if swallowed have a deleterious effect.

I had nearly forgotten the second (prone) method of using the Carlisle. It is scarcely worth mentioning, but this paper would not be complete without it. Its advocates neglect nearly all the precautions I have indicated in my ideal process. They do not jam the horse's nose; they do not forcibly shorten all the straps; they neglect to regulate the circulation; they omit to pour chloroform down his nose. They do not lose their heads; they do not dash cold water about; they omit to let him tumble around after the operation. And some of them, though I sincerely hope for the sake of our professional status only very few, some of them may actually neglect the barometer.

J. MUNDY.

INTESTINAL CALCULI IN THE HORSE.

By A. L. BUTTERS, M.R.C.V.S.

Mr. President and Gentlemen, the subject which I have the honour to bring before you is not a modern one and does not possess the charm of novelty; but connected with it are some very interesting physiological and chemical problems. These, however, I have left for men of learned leisure to study—perhaps to solve; my paper is of an introductory rather than of an exhaustive character, and I have written it thus because I take it that cases of disease arising from calculi are not occurring frequently in our practices. They are in fact rather rare, and life is too short for any one man to acquire from personal experience a profound knowledge of the subject; it is therefore one where a free interchange of our views and experiences is especially valuable and if my paper provokes a good discussion its object will be attained.

I have divided the subject into four parts viz., the varieties, causes, symptoms, and treatment.

VARIETIES.

The calculi found in the intestines of the horse, as you will perceive from the specimens before you, vary considerably in size, shape, weight, and chemical composition. A comparison of these two specimens will show the difference in size. In weight they vary from 1oz. to about 20lbs, but the majority generally range from about 1 to 7lbs. The surface of some are smooth and polished, whilst others are rough. They are all more or less spherical in shape, unless there are several in the bowel at one time when they present surfaces which are more or less flattened.

The late Professor Morton divided them into three classes viz., the Phosphatic, the Oat hair, and the Mixed, and all the specimens I have seen can be classified under one of these three heads.

The Phosphatic are the most frequently met with and are the heaviest kind of calculi, they have a smooth or polished surface. Their chemical composition in 100 parts is given as

Ammonio phosphate of magnesia	48·00
Phosphate of calcium	19·00
Water	14·00
Animal matter	·80
Soluble salts, etc.	6·60
Extractive matter	4·00
Fatty matter	7·00
Loss	·60

As a rule there is but one phosphatic calculus found in the intestine at one time, but occasionally there are several, and in one case that came under my notice there was over 150 in the intestine. I have the specimens here. In this respect they differ from other forms of calculi, for I have never known more than one oat-hair or mixed calculus to be found in the intestine at one time.

Oat-hair calculi, or more commonly called dust balls, are said to be found in the cæcum or colon, and consist, as their name indicates, almost entirely of the beard of oats, barley, or other grain. They sometimes attain a large size, but compared with the phosphatic are light in weight; they generally assume the same shape, and are sometimes mixed with phosphatic salts.

Mixed calculi are less constant in their composition, and are occasionally called dung balls. They are composed of phosphatic salts, fæcal matters, oat-hair, or any indigestible matter found in the intestine.

After this brief survey of the different varieties of calculi I shall now go on to the causes which lead to their formation; this I consider is not only the most important and interesting part of my subject, but is also the most difficult. Interesting as it enables us to give our clients a reasonable explanation for their presence in the alimentary canal, and important because a correct knowledge of these causes enables us to recommend and adopt measures to prevent their recurrence, and difficult—perhaps not more difficult than other problems we have to solve—because we have no means of ascertaining the time when they first begin to form—the time when treatment would be most valuable; we seldom or never suspect their presence until they have attained such dimensions that they get fixed in a position to cause pain to the animal. Difficult also because our knowledge of the physiological and chemical processes which take place in the large intestines—the organs which, in my opinion, are chiefly involved, for I have never met with a calculus in the stomach or small intestines—is not yet perfect. I might also add that in this, as in other complaints of infrequent occurrence, we are seldom made acquainted with all the facts of the case, and our experience is insufficient to enable us to estimate correctly their separate or conjoined importance.

CAUSES.

A cursory examination of these specimens will lead us to the conclusion that different forces have been at work in their formation. Thus the forces which produce a phosphatic calculus differ from those which produce an oat-hair; whilst in the mixed we have a combination of both these forces more or less. In order to elucidate what these are we will make a close examination of the calculi themselves. If we cut a phosphatic calculus in halves we will find about the centre a nucleus around which the calculus is formed in concentric layers. The nucleus generally consists of a bit of iron, stone, India-rubber, or other material which in ordinary circumstances has no right in the alimentary canal. This section also throws considerable light upon the manner in which this kind of calculus is formed. The

Read at the meeting of the Central V.M.S. (See p. 462)

nucleus being swallowed and neither digested or passed onwards has precipitated upon itself the constituents forming the calculus, the churning action of the stomach, or more probably the peristaltic action of the bowels, gives it a rounded shape. The layers, which can be separated, shew that its size has been increased at intervals, each layer marking a period of time to estimate the length of which is mere conjecture. As a nucleus can be found in every phosphatic calculus I think it is only a fair inference that if there had been no nucleus introduced into the alimentary canal no calculus would have been found there. This however is too narrow a view to take of the subject, and compels us to accept as a theory that every time a horse swallows a bit of iron or other material capable of forming a nucleus, a calculus is formed around it. My own observations lead me to contend that this is not so, and unless the animal which has the misfortune to swallow a nucleus is fed upon a diet in which phosphatic and mineral salts are in excess, and is also affected with a condition of the alimentary canal commonly described as morbid, no calculus is formed. The nucleus produces no change in the contents of the bowels and is passed out of the body in the ordinary way. The diet referred to has, besides a fair amount of oats and beans, a liberal quantity of bran. The morbid condition of the alimentary canal I know very little about, I only know there is altered functions, and that instead of attempting to dissolve the nucleus or confining itself to its normal functions of separating and passing innutritious and used up material out of the body, it manufactures these monstrosities.

If we divide an oat-hair calculus we will find the cut surface presents a very different aspect to the phosphatic. There is first an absence of a nucleus; at all events I have always failed to find one. Then the material of which it is composed is not arranged in layers, it is simply a homogenous mass of oat-hair or similar indigestable matter, glued or cemented together by the juices of the intestines, and pressed into shape by the contraction of their muscular walls. Its rough external surface does not suggest to my mind that it has been moved far from the seat of its origin, at least it does not seem to have increased its size by being rolled about, like a snowball in the snow. The absence of a nucleus and the irregular shape which a number of them assume lead me to think they are formed in a very different manner to that of the phosphatic. The material of which they are composed accumulates in a portion of the intestines and is there permeated with fluids of an adhesive nature. By and bye the mass is moved by the action of the bowels, and the ends of the accumulation are pressed or doubled up, leaving a gap in the centre and in this shape it remains, the hardening process having taken place at this particular juncture prevents it being pressed into a spherical shape. It will thus be seen the causes leading to the formation of this kind of calculus are a diet in which the beard of oats is in excess, or fodder containing a plentiful quantity of woody fibre, and a morbid condition of the bowels. It strikes me that conditions similar to those which produce impaction of the bowels are at work in assisting to start the formation of an oat-hair calculus. I do not think I need take up your time by dwelling upon the formation of the mixed calculi as it would be a repetition of what has been said about the other two forms.

To sum up, the conditions I think favourable to the formation of intestinal calculi in the horse are:—

(1) Diet. The drinking water may have something to do with it but I have never been able to trace this satisfactorily. In a phosphatic a diet rich in phosphatic salts, and in the case of an oat-hair a diet in which bearded oats or similar indigestable food is abundant.

(2) The presence of a foreign body in the intestine to act as a nucleus in the case of a phosphatic or mixed.

(3) A morbid condition of the alimentary canal which not only favours the adhering of the constituents of the calculus, but also favours their retention in the bowels until they attain such a size that it is impossible for them to pass out of the body in the natural way.

Symptoms.

The symptoms exhibited by an animal suffering from an obstruction in the intestines caused by a calculus resemble those of colic and impaction of the bowels so closely that they may be considered identical. A high authority has said there are no symptoms diagnostic of the presence of a calculus, and with this opinion I agree. I do not wish it to be understood however that their presence is never recognised during life; on the contrary, this has been frequently done; I have done so myself and so have many others, but that conclusion has generally been arrived at from manual examination per rectum, or from previous knowledge and experience of the stud from which the patient came, rather than the symptoms displayed by the patient itself. In short their presence has been guessed at rather than accurately diagnosed. I trust the discussion which follows will assist us to differentiate, and if possible perfect a code of symptoms diagnostic of the presence of calculi. I say if possible, because I daresay you will agree with me it will be very unsatisfactory to define certain symptoms as diagnostic and relying upon these attribute an animal's illness to the presence of a calculus, only to find at the post-mortem that calculus conspicious by its absence. My remarks therefore upon symptoms will be very brief, very general, and I fear you will consider them rather indefinite.

Horses which suffer from frequently recurring attacks of colic are not, in my opinion, the subjects of calculus. The illness which they produce, although it may be protracted over several days or even weeks, has had but one termination—death. The chief and constant symptom is abdominal pain. This of course is manifested in a variety of ways, by the animal going through certain movements and assuming certain postures with which you are all familiar, such as pawing, lying down, rolling, backing round the box, and occasionally sitting on the haunches. There is also tympany, at first slight but gradually increasing; there is no passage of flatus or fæces. The pulse, at first strong and full, as the case progresses becomes quicker and weaker, and finally imperceptible; the breathing becomes shorter and more distressed, and at last cold prespirations break out over the body, and death puts an end to the scene. I might add that you may have all these symptoms and yet the animal not be suffering from calculus. Occasionally you get cases where the symptoms of abdominal pain are not so well marked, and in these cases the calculus is generally found to be large. There is dullness, loss of appetite, with occasionally very slight colicky pains, etc., the animal dies rather suddenly. Some horses pass small phosphatic calculi in their fæces, but these give rise to no inconvenience to the horse; but why calculi, when they attain this size, are not always passed out of the body is a physiological question I cannot answer.

Treatment.

Treatment naturally enough divides itself into two heads—remedial and preventative. Of the remedial very little can be said; medicine can have very little effect in shifting these obstructions. Purgatives, laxatives, subcutaneous injections of physostigmine, the administration of alkalies, stimulants, and sedatives, are the medicines usually employed, along with copious and frequent enemas of soapy water and tobacco smoke. I need not remind you how often these fail to give relief. In my opinion nothing less than an operation will do so, and

these, rather than twist, are the cases in which an operation is likely to be successful, and it may be that veterinary surgery may yet claim the operation for the extraction of intestinal calculi as one of its triumphs.

If I have been correct in describing the conditions favourable to their formation a good deal can be done in the way of prevention. With regard to the nuclei it has been found that iron is the most frequent. Where the provender is mixed and prepared on a large scale all the little bits of iron can be removed—and it is the little bits that do the mischief—by the use of an automatic separator. The separator consists of a magnetized plate and the iron is extracted as the food passes over it. Of course the accidental introduction of other foreign substances cannot well be avoided, but these cases are comparatively rare. Now as regards diet I have already said that I have found that where animals died from phosphatic calculi they had received a diet in which besides a fair quantity of oats and beans there was a liberal supply of bran. Without entering into the chemical composition of the several articles of diet to show which contains in the greatest abundance the elements from which the calculi are formed, I will tell you my experience. The animal from which the 150 phosphatic calculi were taken belonged to a firm which had previously lost several horses from stone; their stud was fed upon bran and beans, with as much hay as they like to eat or waste. The quantity of bran would be about 6 or 7lbs. per diem. This was altered; oats and maize were substituted for a quantity of the beans, and the quantity of bran was reduced to rather less than about 2lbs. per days. No case of phosphatic calculi has occurred in the stud since, and that is 20 years ago. Another case; a company had lost in the course of a few months about 10 horses with phosphatic calculi; these horses were fed upon chaff, oats, beans, maize and bran; the quantity of the latter being at the rate of 5lbs. daily, this quantity was reduced to 2lbs. per day, an automatic seperator was also used where the provender was mixed, and no death from phosphatic calculi has occurred since this change was effected, 15 years ago. Gentlemen, these cases speak for themselves; they require no further comment from me, and suggest one of the means of prevention. With respect to the oat-hair, I have had very little experience with them but in my opinion the avoidance of excessive use of bearded oats is a good step towards prevention. If my theory is correct as to their formation, regular work will also be a good preventative, as remaining idle in the stable for several days will induce impaction of the bowels quicker than anything else.

I conclude with one general remark; a good prevention for this, as well as a number of other complaints, is to maintain the animals in good condition. The overworked and under-fed animals will eat substances which produce injurious effects, and which the more regular fed animals would reject and leave in the manger, and so save himself pain and his owner loss.

VETERINARY SOCIETIES.

ROYAL VETERINARY COLLEGE MEDICAL ASSOCIATION.

A meeting of the above took place in the College on Wednesday February 7th, at 6.30 p.m. Mr. Gazi in the chair, there were also present 48 members and visitors. An essay was read by Mr. S. Stephens, M.R.C.V.S., on "Hoose and Husk." The essayist described the life history of the parasites causing the disease, the animals they effected and the treatment, including the preventative measures. Several views of the parasites were also thrown upon the screen during the evening. At the close of the essay a good discussion took place, principally in regard to the treatment, a large number of gentlemen taking part. The proceedings terminated with very hearty votes of thanks to the essayist and chairman.

R. Over, *Hon. Sec.*

BORDER COUNTIES VETERINARY MEDICAL SOCIETY.

A general meeting of this Society was held at the Bush Hotel, Carlisle, on Friday, the 24th November. A paper was announced to be given on "Improvements in Veterinary Surgery, with special consideration of antiseptic methods," by Profession Dewar, of the Royal Veterinary College, Edinburgh.

The President, R. Rutherford, Esq., F.R.C.V.S., occupied the chair, and there were also present Prof. Dewar, Edinburgh; Messrs. Mayor, Kirkham; Carlisle, Bell, Young, McKie, Hewson, Carlisle; Little and Little, jun., Abbeytown; Donald, Wigton; Lindsay, Dumfries; Howe, Keswick; Pears, Penrith; Tucker, Brampton; Croudace, Haltwhistle; and J. Armstrong, Penrith, hon. sec.

Letters of regret at absence were received by the secretary from several members.

Mr. Dawson, Carlisle, wrote resigning his membership.

The list of members who had not paid their subscriptions was produced. It appeared that there were only two who owed for two years; and it was agreed, on the motion of Mr. Bell, seconded by Mr. Donald, that circulars be sent out to the members in arrear.

At the suggestion of the Secretary, it was agreed to leave open the date of next meeting.

Mr. Donald intimated that at the next meeting he would bring forward a resolution to abolish having a reporter present.

Mr. Fred Armstrong, Penrith, and Mr. John H. Siddle, Penrith, were elected members. Mr. Armstrong nominated for election Mr. Joseph Little, Abbeytown, and Mr. Park, Penrith.

Election of Officers.

Mr. Bell proposed that Mr. Pears be president for the ensuing year. Their present worthy President had declined to stand on another year; and in Mr. Pears they had amongst them one of the oldest practitioners in the district.

Mr. Donald seconded the motion, which was carried with applause.

Mr. Pears said he would rather they had acted on Mr. Thompson's suggestion and appointed the retiring president for another year. He was scarcely worthy of the position to which they had elected him, but he would do his best to serve the interests of the Society.

Mr. Armstrong proposed that Mr. Rutherford and Mr. Tucker be elected vice-presidents. Mr. Bell seconded the motion, which was agreed to.

It was decided to ask Mr. Thompson to continue his services as treasurer another year.

Mr. Bell proposed that Mr. Armstrong be re-elected secretary. They could not have a better, and he was sorry that next year they would have to look out for another, as Mr. Armstrong was determined not to continue longer in the work.

Mr. Howe seconded the motion, which was supported by Mr. Carlisle and carried.

Mr. Armstrong said it was his wish to retire. He had held the office since 1885, and there was undoubtedly a deal of work connected with it. Some of it was very

pleasant and brought him into communication with gentlemen of eminence in the profession. He had accepted the post this year on condition that Mr. Pears accepted the presidency, so that they could work together in Penrith.

Professor DEWAR then read his paper (which has appeared in full in the quarterly journal.)

The CHAIRMAN said he was sure he gave utterance to their feelings when he said they owed a deep debt of gratitude to their friend Prof. Dewar for his very interesting and instructive paper—a sort of resumé of the principles and practice of aseptic surgery as it existed at the present time. He had opened up a wide field for discussion, dealing not only with the principles of aseptics, but he had brought before their notice new methods of performing certain operations and new methods of dealing with injuries and wounds and openings generally. The platform on which he stood was a common one. They were all familiar with wound and accidents, and the modes in which they treated them; and there could be no difficulty in according Professor Dewar's paper a very excellent discussion. He did not suppose that Professor Dewar expected everyone to agree with him. They had all had many cases not treated antiseptically, and had made wonderful recoveries.

Mr. CARLISLE said of all the papers he had heard at those meetings, that of Professor Dewar's was the best. It touched upon subjects which they ought all to be acquainted with, and any one of them was quite sufficient for a lengthly discussion. He had operated in many cases of division of the tendons, and two or three articles of his on the subject were published in *The Veterinarian* forty years ago. He was very successful in two or three cases. Cases were not always successful, and a good deal depended on what they were operating for—whether the disease was above or below the place where it was intended to divide the tendon. Referring to the diseases which required this operation, he mentioned the thickening of the tendon common in dray horses, extending two or three inches below the articulation of the knee joint. It was a very bad disease, and caused more horses to go lame than sidebone did. A great difficulty in the operation was keeping the horse in a proper position. He remembered a case where the thickening was in the fetlock joint, and a lot of force had to be used to get the leg straight when the tendon was divided. It was very bad to use much force, because inflammation was set up and that interfered with the after treatment. In cart horses lameness sometimes prevailed for a long time before the thickening of the tendon was discovered, and at last it becomes so acute that the front part of the fetlock joint would shoot forward in consequence of the contraction of the tendon behind. That was a very good case for an operation. The only difficulty he found in these matters was to retain the limb in a proper position during the whole process. He had never neglected putting the horse into slings and accustoming it to the slings for two or three days before operating. If the horse was restless let him inhale a little out of the chloroform muzzle. As regards neurotomy, it was as simple an operation as could be performed, and was very often performed when it would be far better to let it alone, in cases of navicular disease among old worn out animals. But if it was performed at the proper time it was one of the most valuable operations there was.

Mr. PEARS said the treatment of open joints was one of the most important things. Professor Dewar, he learnt, had most faith in cooling treatment by the continuous application of cold water, and with that he quite agreed. He had frequently performed the operation of neurotomy. The last case was an old worn out horse, which a fortnight afterwards a boy was hunting with. The first day it went grand, but the next day the tendon was worn through and down it went. With a tendon worn by navicular disease it was not wise to try neurotomy.

Mr. HOWE said the address was so very valuable that he thought much more of what Prof. Dewar had said than of any remarks which might be made by himself.

The CHAIRMAN said he remembered perfectly well when no precautions were taken. A horse was thrown, or a dog laid on its back, and frequently the most formidable operations were performed without any precautions whatever—frequently without the operator's hands being washed, and frequently without the knives being washed, except after the previous operation. (Laughter). The mode of stopping blood was frequently by suturing with wire, sometimes silk, and sometimes string of different thicknesses; and as a matter of fact they knew of animals recovering from extraordinary injuries without any aseptic precautions being adopted. He was not an admirer of the old methods. Every time he had to make a wound he took the greatest precautions. He was most particular about the surrounding atmosphere being as pure as he could have it—not only in cases of injuries, but in common disorders. The care they had taken in the treatment of animals was one of the things which had done a great deal to advance their profession in the estimation of the public. He could refer particularly to the advantages of aseptic surgery in cases of severe injuries. He mentioned a case where a horse was injured in rearing and falling on to the pump handle of a carriage. The handle went between the last two ribs, one of which was hanging out of the wound eight or ten inches, and the wound was one into which he could put his hand. The owner proposed to destroy the horse, but he said "don't do that." He removed the rib; he did not suture the wound, but pulled it together with his hand and dressed it with carbolized oil and layers of cotton wool, and wound a broad band of cotton cloth, about two feet wide, round the ribs six or eight times. He gave the horse a dose of morphia, and kept him quiet for a few days. The bandage was removed ten or twelve days afterwards and the wound was almost entirely healed, except a little bagging along the lower end of the margin of the ribs. That was in the early days of the aseptic treatment of wounds. This was an excellent chance of putting it into practice, and the result was entirely successful. The rib he removed was in the Dick College or the New College, with a history of the case. In his early days in India there was no aseptic surgery in force, and he instanced a case of a man having both legs taken off by Sir Joseph Farrer, a great friend of Lister's. The operation was performed without antiseptic precautions, and the man recovered, and furnished an extraordinary example of recovery from two major operations in one body. He could bear out what was said about the necessity for antiseptic treatment in regard to open joints; but he would also point out how frequently this treatment failed, simply because the animal could not be kept quiet and the surroundings were not all that could be desired. In such cases they had to fall back on the old style of treatment, and it was remarkable what severe cases recovered. There were different ways of applying aseptics. He remembered one horse with an open stifle joint, quite unable to rise. It was lifted off the ground with slings, in which it was kept, a man in charge doing nothing else but sit down and dust on carbolised French chalk. That horse recovered. Quite lately there was a horse with an open capped hock, and it bid defiance to every mode of aseptic treatment, down to the new one—injection with oil of cloves, which had no more effect than if it was fish oil. (Laughter.) In that case there was immediate amendment, and gradual and perfect recovery with constant irrigation of cold water. In these cases he had a tank put up, the animal slung, a tube applied to

the injury and a tap kept going night and day. He referred to the Danish operation for the treatment of the hock, and said in serous abscesses which were commonly opened with a scalpel, he used a sharp pointed iron, and then put a little dry cotton wool into the wound, and did nothing else; but he always got a degree of suppuration, and he found in the suppurative process the swelling subsided, and in the course of a few weeks there was almost complete eradication of what was formerly a nasty eyesore. Feet injuries were as common as ditch-water with him, and having a large town practice with lots of heavy cart horses, they had to be treated very largely aseptically. But to asepticise in feet injuries was of no value unless a man was a bold surgeon as well. There was an absolute necessity for free exposure of the injured parts, and frequently the removal of what was dead and irritating. In the absence of that no amount of asepticising was of the slightest value in the treatment of feet diseases; he made bold to say that it was of more importance than the subsequent antiseptic treatment of the wound. He had marvelled many a time—a horse received severe injury to the laminæ from a drawn nail; a nail is withdrawn and another one put in, and in about a fortnight there was a very high degree of lameness and threatened disease of the coronet. In a number of these cases there was the actual exfoliation of portion of the pedal bone; it might not be thicker than a sixpence—it was often less. In those cases aseptic treatment would be of no value at all. There must be entire removal of the whole face of the wall and the thin strip oveylying within, and no antiseptic precautions are necessary, except good hot water or a poultice, which acted marvellously. No asepticism there. He did not say aseptic treatment would not make it heal a day or two quicker, but he said that sound surgery was of the first importance, and asepticism came after as an aid. He described the case of a horse which had been severely cut across the thigh by another horse. It was treated strictly antiseptically, and was put into a quiet place, and the wound kept dry. On the 15th or 16th day he noticed the first sign of tetanus. He changed the treatment to the old fashioned one. He had to make open dressings, and if there was any opportunity for the wound to get contaminated it was then. All the dressings were taken off and the wound was only treated with ordinary turpentine liniment to produce suppuration. The animal began to do very well. Such was his experience. Many a time he had had horses with picked up nails. He did not think it was a wise thing to try to heal by a dry wound. On the contrary he was fond of keeping the foot as soft as he could, in water as warm as could be, or a hot poultice. He preferred that to dry antiseptic dressings. He was satisfied that there was more danger from the pressure of dry dressings than from any possibility of access of germs from the water or poultice. He was prepared to set one against the other and state a number of cases any day they liked.

Mr. MAYOR tendered his thanks to Professor Dewar for his interesting and instructive paper. He confessed that he was one who believed that the value of antiseptic surgery was very much over-rated by many. He was much in accord with Professor Sampson Gamgee who said "The greatest antiseptic is life," and who said he did not use antiseptics to any great extent in his surgery. Professor Dewar mentioned particularly abdominal wounds in human surgery. Lawson Tait of Birmingham, was one of the greatest abdominal surgeons in the world, and he never used any antiseptic whatever. Of course he went in for asepticism, but he did not employ antiseptic dressings. Prosfessor Lister modified his views with regard to the use of carbolic acid, and did not think it was anything like so good a thing as he at first believed. The strides made in surgery were no doubt largely owing to the introduction of Lister's antiseptic treatment; but probably it was not so much due to the agents he used as to the more careful manner of performing the operation, and the necessity fully recognised of the surfaces being scrupulously cleaned. In regard to foot wounds his experience was a flea-bite compared to men like Mr. Rutherford, but he was entirely at one with Mr. Rutherford, and he liked to see the foot suppurated. He had heard one or two practical suggestions and wrinkles from Professor Dewar. His notion of applying iodoform dissolved in ether was something he had not heard of before, and it commended itself strongly to his mind. It would be absolutely effectual as regards the application of the iodoform satisfactorily to the crannies and recesses of the wound. He was pleased to hear Prof. Dewar refer to the use of perchloride of mercury instead biniodide of mercury, in combination with cantharides. He saw the suggestion in a translation from a German paper in Professor McFadyean's valuable journal some years ago, and he was struck with the idea and for four or five years it had been his practice to use the perchloride.

Mr. DONALD, referring to sutures, said that he agreed that silk was the best—it gave him the least trouble of any that he dealt with. He believed that many flesh wounds were better left unsutured; they sutured many which would be far better if left alone. It was his practice now, wherever a client would be satisfied, to leave open flesh wounds unsutured; it left practically no blemish. He thought antiseptics had been a little over done. In a country practice, where there was plenty of fresh air and clean water, they did not want many antiseptics. He thought there was little fear of atmospheric contamination, if they avoided contaminating wounds with dirty instruments and dirty hands during the operation. In his student days he was taught that carbolic oil was one of the best dressings for wounds, and practitioners were constantly treating wounds with an application of carbolic oil in the belief that it was a true antiseptic; and he believed the wounds did well. But since then it had proved a non-antiseptic. He believed the greatest antiseptic there was was Nature, and he did not think there was much good in antiseptics in a country place. With regard to antiseptics for feet, the only one he used was tar. Nothing was superior to the old fashioned tar. With regard to Professor Dewar's remarks about the germ theory, he thought that theory had been sadly overdone, notwithstanding that a good deal had been written and said about anthrax, rabies, tuberculosis and glanders, he believed in the scientific man who had the best diagnosis on the evidence.

Mr. CARLISLE said with regard to open joints, he had been most successful in treating that disease by keeping the animal in a perfect state of quiescence, and by using creosote and a mixture of lime and sulphate of copper, and just touching it on every time the man went into the stall. He also referred to the treatment of umbilical hernia, and explained his plan of using needles with the ends protected by cork. He spoke of the tendency to tetanus in the treatment, and of the annoyance to which operators were exposed by the loss of valuable animals. He had had two or three cases of tetanus from neurotomy.

Mr. LITTLE endorsed Mr. Carlisle with regard to tetanus following operations for umbilical hernia. He had an idea that it was caused by the use of ligatures which produced irritation. With regard to antiseptics he had used carbolic oil ever since it had come into use, and he found it to be the best thing he had ever done. He spoke of its good effect as an anodyne. Common salt was spoken of as an antiseptic, but he thought it was the very thing to irritate a wound. It was an old practice to wash a wound with salt and saltpetre, but he thought that had died out entirely. Approval had been expressed of washing out the uterus of cattle with

carbonate of soda; but nothing was said about laminitis in mares.

The CHAIRMAN:—I think it would answer just as well.

Mr. LITTLE:—I have used carbolic oil and warm water, and I have turned back to them from other things.

Mr. CHAIRMAN:—Doesn't that produce straining?

Mr. LITTLE:—Not at all.

Mr. CHAIRMAN recalled a large number of cases of tetanus, all directly related to the existence of a cord or string in the wound.

Mr. DONALD remarked with reference to the use of perchloride of mercury, mentioned by Mr. Mayor, that there was one hint which should be noticed. In the preparation it should be well powdered, otherwise blemishing was likely to result. In consequence of deaths from tetanus, he added, he had modified his mode of operating for umbilical hernia.

Mr. ARMSTRONG said the only thing he was sorry for in regard to the paper read by Prof. Dewar was that he did not think they were able to discuss it properly at one sitting, and without seeing it in print. He moved that the discussion be adjourned.

Mr. CARLISLE seconded the motion, which was supported by Mr. Pears and the chairman, and agreed to with applause.

Professor DEWAR, replying upon the discussion, reminded the members that tetanus was due to a germ and was a contagious disease. It had been proved that it was due to a certain bacillus, which need not enter the tissues to cause tetanus, but the bacillus elaborated some alkaloid or other substance which, if injected into another animal, would cause tetanus. He had had experience of two horses succeeding each other in one stall which had become affected. He had also had experience of tetanus occurring in the ligaturing of umbilical hernia. He had no doubt that it was simply due to want of antiseptic treatment. This he had applied and had not been troubled with tetanus recurring after an operation for umbilical hernia. With regard to germs, he had had to use a microscope to distinguish between black-quarter and anthrax. Where it was confined to the internal organs it was difficult to tell, and he had to have recourse to a microscope to distinguish between the two. In anthrax the bacilli were found in the blood; in black-quarter they were only found in the tumours which were formed. As to Mr. Carlisle's experience of tetanus occurring after performing neurotomy, if he would treat them antiseptically he would pay for all the horses which died of tetanus resulting from the operation afterwards. (Hear, hear).

A vote of thanks to Prof. Dewar was warmly given, and the meeting terminated.

THE CENTRAL VETERINARY MEDICAL SOCIETY.

The usual monthly meeting of the society was held on Thursday evening the 1st inst., at the Royal College of Veterinary Surgeons, 10 Red Lion Square, W.C. Mr. A. Prudames, the president, occupied the chair, and the other Fellows present were:—H. Boyson-Arnald, A. L. Butters, R. Butler, A.V.D., F. J. K. Bruce, F. Duck, A.V.D., H. Edgar, W. H. Farrow, B. Glover, A.V.D., T. C. Garry, J. S. Hurndall, F. K. Kendall, Prof. Macqueen, F. C. Mahon, Hon. Sec.; P. McOnie, Prof. J. Penberthy, H. G. Rogers, W. Rowe, Hon. Treas.; J. E. Rickards, W. Roots, A. Rogerson, F. G. Samson, W. Stapley, H. Singleton, F. Wragg, Fitzwilliam Wright, W. Willis. F. W. Willett, J. Woodger. Also the following visitors: W. H. Williamson, A. P. Calastreme, Morgan-Evans.

On the motion of Mr. J. ROWE, seconded by Mr. H. EDGAR, the minutes of the preceding meeting were taken as read and were confirmed.

CORRESPONDENCE.

The HON. SEC. (Mr. F. C. Mahon) announced that he had received letters expressive of regret at their inability to attend from Mr. W. F. Barrett, Professor T. Walley, (Edinburgh) and Mr. J. Roalfe Cox, and telegrams apologising for absence had come to hand from Mr. W. Hunting and Mr. C. Sheather.

NEW FELLOW.

A ballot ended in the unaminous election of Mr. J. E. Kitchin, of Manor Lodge, High Road, Upper Clapton, as a Fellow of the Society.

NOMINATIONS.

The following gentlemen were nominated for election as Fellows:—Mr. C. H. Cordy, M.R.C.V.S., 382 City Road, proposed by Prof. J. Macqueen, Mr. A. Prudames, and Mr. F. C. Mahon; Mr. S. L. Stephens, M.R.C.V.S., Royal Veterinary College, Camden Town, proposed by Mr. Prudames, Mr. J. McFadyean and Mr. F. C. Mahon; Mr. Craft, M.R.C.V.S., 24 London Street, Reading, proposed by Mr. F. Hobday, Professor Macqueen, and Mr. F. C. Mahon; Mr. T. Wooff, M.R.C.V.S., Greenwich, proposed by Mr. F. Hobday, Mr. F. C. Mahon, and Professor Macqueen; Mr. W. H. Williamson, M.R.C.V.S., proposed by Mr. W. J. Mulvey, Mr. F. C. Mahon, and Mr. J. Rowe; and Mr. P. Easte, M.R.C.V.S., 96 Gray's Inn Road, proposed by Prof. Macqueen, Mr. Prudames, and Mr. Mahon.

A VETERINARIANS' DEFENCE SOCIETY.

Mr. J. S. HURNDALL said that at the previous meeting of that society an informal conversation took place with regard to the desirability of the veterinary profession having a strong defence society, so that they could thus mutually assist each other should occasion arise by reason of any adverse action on the part of their clients. He assumed that they were probably aware that there was in existence already a society in Manchester which had a two-fold character. It was a Benevolent Society which afforded aid to those who had been unfortunate in life, and it was also a Defence organisation for the protection of those of its members who got into difficulties in professional matters generally. The rule now was in this society that when the defence fund reached a maximum of £500 all further sums went to the benovolent account of the society. He believed, and his view was shared with several friends whom he had consulted on the subject, that a limit of £500 for defence purposes was wholly inadequate to the requirements of the case. There might arise, for instance, such costly litigation as that which had recently occurred in the still-pending case of Smith *v.* Reynolds, and it was felt that £500 was an insufficient sum to have available for protective purposes in connection with their profession. Before taking steps for starting a new society, if this should be found necessary, he suggested that it would be only courteous to learn from the Manchester Society whether, given a large increase of membership, that society was willing to alter its rules so as to admit of the indefinite augmentation of the defence fund, and the separation of its benevolent from its defence branch. In other words, they might be asked to create two distinct societies, one for benevolent objects, and the other for defence in professional difficulties, with option to veterinary surgeons to subscribe to either or both. Personally, he thought that from an interested point of view a defence society was even more desirable and necessary than a benevolent society. He was desirous of eliciting the views of the fellows of that society on this subject. He moved:—"That the Manchester

Benevolent and Defence Society be asked whether it is prepared to consent to an alteration of its basis in the separation of the benevolent from the defence objects of the society, conditionally upon the accession of a large increase of members, and that the sum available for defence purposes should be unlimited."

Mr. F. G. SAMSON, in seconding the motion, said the Manchester Society had now been in existence many years, and he was very much surprised—indeed he was almost disgusted—that the profession had not had the good sense to help themselves by joining that society. Out of the large number of veterinary surgeons in this country—he believed between 3,000 and 4,000—only 120 members belonged to the society. That fact spoke for itself. There was no doubt that combination for defence purposes was a desirable thing amongst veterinarians, as amongst the members of other professions, and he agreed in the propriety of first applying to the Manchester Society to ascertain whether they were prepared to modify their rules in the direction desired. At the same time he knew that the members of the Manchester Society held very strong conservative opinions. As he had said that society had existed for many years, and if gentlemen in the profession had not the good sense to help themselves when they had the opportunity, they could not expect others to help them when they got into trouble. The subscription the Manchester Society required was only half-a-guinea per annum. Personally, he should prefer that it was two guineas. He could not account for the apathy of members of the profession in holding aloof from the Manchester Society.

Mr. HURNDALL :—They have not known anything about it.

Mr. SAMSON :—That is perfect nonsense. It must be known and has been known.

Mr. HURNDALL —Recently !

Mr. SAMSON :—I will say this of the society : in two or three cases where, to my knowledge, members have appealed to it when they have got into trouble, the society has rendered them every assistance and fought their cause gallantly and well.

Professor PENBERTHY said if this Manchester Society was not popular, probably the reason was that benevolence in the form in which it was distributed by the society and the defence undertaken by them, were scarcely compatible. (Hear, hear). But he doubted whether with subscribers who had subscribed for many years to the society because of its two-fold object and with the money of many original members now dead, the society could now be altered in its formation and its aims. However, no harm could be done in ascertaining the views of the society. He quite thought that seeing defence was one thing and benevolence another and different thing, there should be two distinct societies in furtherance of those objects.

Mr. H. EDGAR said that although with respect to past payments it might not be possible to alter the application of the money subscribed, yet it might be feasible to adopt a rule directing that future subscriptions should be solely applied to one or other of the objects for which they were given : either benevolence or defence. Thus two separate and distinct funds or societies might be created. If the number of members to the defence society was doubled or trebled the society instead of having one case to defend might have half a dozen on hand at the same time. In that event what would be the use of the £500 which was now the maximum limit for defensive purposes ? He thought that the motion was a wise one : that they should first approach the existing society with a view of ascertaining (1) whether the two funds could be kept separate, and (2) whether given a large accession of new members, the sum available for defence purposes could be largely increased and made commensurate with possible requirements.

Mr. HURNDALL said that Mr. Samson had blamed the profession for not having joined the Manchester Society and, to a certain extent, he was disposed to agree with him. At the same time there was another side to the question, and he (Mr. Hurndall) could not allow that the profession was wholly to blame in this matter. Members of the Manchester Society had taken no steps whatever to increase their number. While he was in practice at Liverpool he was often seeing professional friends at Manchester, and he had opportunities of hearing what was going on in the latter city. Mr. Samson might be surprised to learn that neither Mr. Morgan, Mr. Greaves, nor Mr. Taylor, who were prominent members of the society and whom he often met, ever once asked him to join the society. (Mr. Samson :—Why should they ?) Why should they ? Because in the first place they took an interest in the society. Had he been in their position in relation to the society he should have deemed it a moral duty on his part to solicit them to join. They never once broached the subject to him. It was not for Mr. Greaves to make a display of what he had done.

Professor PENBERTHY :—He has invited people to join them.

Mr. HURNDALL :—He may have done so, but he has not done so personally to my knowledge. And I maintain that we do not generally find gentlemen in our profession or in any other who are disposed to push themselves forward, and show eagerness to join a society without being asked to do so. Had I been asked to join I should have joined long ago. I have not joined up to the present time. It was a matter of delicacy with me. I did not care to push myself forward in the matter and when I met month after month prominent members of the society who never once hinted that I should join, I wondered whether only a certain number of members were wanted, whether some were acceptable and others were not.

Professor PENBERTHY :—Perhaps you are too sensitive, sir.

Mr. HURNDALL :—May be I am, we have all our faults, but I should not hesitate to say in Mr. Greaves' presence what I have said in his absence, I do not mince matters with any man.

The CHAIRMAN suggested that before they sent the resolution to the Manchester Society it would be well to get a list of gentlemen—say 20, 30 or 50—who would signify their readiness to join the Society in the event of its being altered as they desired. That would be something tangible. They might go even further and communicate with other kindred societies with a view of ascertaining whether they were prepared to support the Manchester organisation if the desired change was made. In this way if the Manchester society failed to meet their wishes they would secure, perhaps, the nucleus of a new society for defensive purposes which might be established on a wide and comprehensive basis. At the same time he did not think that the rules of the Manchester Society were like the laws of the Medes and Persians—unalterable. He was inclined to think that that Society had the power of adaption to the requirements of the times.

Mr. HURNDALL said he thought the suggestion of the Chairman was a very happy one. Unless they could show the existing society that they were prepared to do something for it, they could hardly expect it to do something for them. Nor should they limit their action to their own society. He should be prepared to move as a subsequent resolution that the secretary communicate with the other veterinary societies to learn how far they were disposed to support an organisation based on the defensive principles desired. Personally he would take care to bring this matter before the Royal Counties Veterinary Society at its next meeting. In this way they might get a hundred conditional promises. At

present he believed that the Manchester Society worked entirely from that city, and that if a Londoner had a case in which he needed their assistance it was requisite for him to travel to Manchester.

Mr. SAMSON :—Not always.

Mr. HURNDALL said, given a large accession of members in the south, it ought to the worth the while of the society to have a branch in London from which affairs could be worked.

Mr. ROOTS :—I quite agree with Mr. Hurndall that £500 is an inadequate sum for defence purposes. I do not see any objection to having a benevolent society tacked on to the defence society. If one does not need the aid of the former so much the better. He will, at all events, have the consciousness of helping his unfortunate brethren.

Mr. EDGAR was of opinion that the two societies should be kept quite distinct, and that it should be optional on the part of veterinary surgeons which they joined. They might join either or both.

Mr. HURNDALL :—I think most men who would be likely to join both would be the least likely to want anything from either. Thus the funds of both would be strengthened.

Professor MACQUEEN said he was not prepared to join the Manchester Society if it remained as at present constituted. He was in favour of separating the two things —benevolence and defence. There were hundreds of gentlemen in the profession who were favourable to a benevolent society, but not to a conjoint society,—a society which sought to serve the double purpose of benevolence and defence. Notwithstanding the remarks of Mr. Samson, he did not think that their Manchester Society was well-known. He did not think they had published their reports regularly, and he did not think he should be wrong in saying that it partook too much of a hole and corner character.

Mr. SAMSON :—I rise to a point of order. The report of the society is printed yearly in the veterinary periodicals.

Professor MACQUEEN remarked that the proceedings of the Society might be well-known to its members and yet not to the outside public. If the Society was desirous of making new members it should advertise itself, and make its proceedings as public as possible. He did not think this old established society would care to have any alteration made in its constitution and objects. That, however, should not hinder the veterinary profession from having both an independent benevolent and defence society of its own. There was great need for a benevolent society in connection with their profession. Hundreds in the profession at the present time required assistance, and the sooner a benevolent fund was started the better with the view to future relief. To live in the veterinary profession to-day was more difficult than it was twenty years ago ; and if by united efforts they could contribute towards the relief of those who were unfortunate, it was their duty to make that effort. If they could come to terms with the Manchester Society let them do so. If not, let them have a society, independently of the Manchester Society.

Mr. HURNDALL :—Although Professor Macqueen has confined his remarks to the formation of a benevolent society, yet I think he is equally desirous of having a defence society.

Professor MACQUEEN :—Yes, separately.

The resolution was then put and carried unanimously.

On the motion of Mr. HURNDALL, seconded by Mr. H. EDGAR, another resolution was then similarly adopted which directed the secretary to communicate the substance of the previous resolution to the other veterinary societies of Great Britain and Ireland, and invite the expression of their views with respect to co-operation in support of the Manchester Society, conditionally upon its amendment in the direction indicated; or, failing this, as to the formation of another society for defensive purposes.

Mr. A. L. BUTTERS then read a paper on "Intestinal Calculi of the Horse," (see p. 455).

EXTRACTS AND NOTES.

R.A.S.E.—ABORTION IN CATTLE.

The Council of the Royal Agricultural Society of England have resolved to make investigations concerning abortion in cattle, and request the favour of the co-operation of stock breeders and veterinarians in various parts of the country, who may be able to afford valuable assistance by the communication of the results of their experience in connection with this disorder.

The Council agreed to the appointment of a committee, which has been constituted as follows:—Sir John Thorold, the Hon. Cecil T. Parker, Sir Nigel Kingscote, Colonel Curtis-Hayward, Mr. Garrett Taylor, Professor Brown, Professor Wortley Axe, Professor McFadyean, and Dr. Sims Woodhead, with power to add to their number.

On an early date the committee will commence sitting for the purpose of taking evidence. Meanwhile, the following series of questions have been drawn up, and in view of the great interest involved it is desirable that they should have the widest circulation possible, for wherever cattle-breeding is pursued cases of abortion are liable to occur, and in most instances have actually occurred. Communications should be addressed to the Secretary of the Society, at 12 Hanover Square, W. :—

1. During what year have you had experience of abortion among your cows?
2. What was the total number of cows kept and the number that aborted in each year?
3. At what month of gestation did most cases occur?
4. Did abortion occur amongst cows at grass as well as among those housed?
5. What was the nature of the diet of the cows during the winter months?
6. Was it observed that the cows that aborted stood near each other in the byre?
7. What was generally done with the cows that aborted—were they sold or again put to the bull?
8. Have you observed repeated abortion in the same cow?
9. Have you formed any opinion regarding the following as possible causes of abortion in your stock—fright or accidental injury, errors in feeding, contagion?
10. Have you observed that cows served by a particular bull were especially liable to abortion?
11. Have you had any experience of abortion in mares or ewes?
12. Have you tried the preventive measures recommended in the Society's Journal (Vol. II., 1891, page 739), or any other method of treatment ; and, if so, with what result?
13. Would you be willing to allow any experimental treatment to be adopted in your herd?
14. Any general observations likely to prove useful for the purposes of the inquiry.

These questions will serve to show the general drift of the preliminary inquiry. The present state of our knowledge of the malady of abortion is hardly a creditable one, but this may partly be due to the circumstance that widely different reasons have been and still are assigned

for the slipping of their calves by cows. Thus, in the "Histoire Naturelle Agricole du Gros et Petit Bétail," by Dr. Pennetier, of Rouen—a work published so recently as last year in a country where, thanks to the researches of Nocard and others, much attention has been directed to the subject—various causes of abortion are instanced. Amongst them are ill-treatment, falling down, fright, debility, unhealthy surroundings, insufficient nourishment, the eating of poisonous plants (such as ergot of rye, ergot of grasses, rue, yew, savin, colchicum, and certain moulds), of plants covered with hoar-frost and of frozen roots, the drinking of water containing ice, the administration of violent purgatives, abrupt changes of temperature, the placing of fodder racks at too great a height above cows' heads, and too great a slope in the floors of byres. When, as is not infrequently the case, abortion proceeds from cow to cow perhaps through an entire herd, the unfortunate breeder may, in a year or two be well-nigh ruined. This transmission of the malady is referred to in the sixth question in the above schedule The preventive measures spoken of in the 12th question involve the frequent use of a wash of which corrosive sublimate is the essential ingredient.

Like the Board of Agriculture.

The Schoolmaster calls attention to a very grave anomaly in elementary education. It appears that the Science and Art Department holds it as almost a rigid principle that nobody can know anything about drawing except a half-pay officer. In London there are seven local inspectors: among these three are major-generals and two lieutenant-colonels; one is a captain, and one, by some oversight, a civilian. In the provinces more than half the local examiners have served their Queen and country in a more active capacity by sea or land before they took up with drawing. Of course we do not say the Department does not know all about it. We do not say a half-pay officer is never any judge of drawing. But certainly it does look strange that ability to discern the merit or demerit of a freehand copy should be so unequally divided between the services and civilians. We wonder if the Science and Art Department could inform us why.—*Pall Mall Gazette.*

Inoculation for the Bite of Vipers.

Two French physicians of the Paris Museum of Comparative Pathology, Messrs. Phisalix and Bertrand, have been experimenting, and have succeeded in communicating a slight attack of snake poisoning to some guinea-pigs. By heating some viper virus at a temperature of 85 degrees Centigrade, they succeeded in weakening it to such an extent that the guinea-pigs were none the worse for the operation. Messrs. Phisalix and Bertrand claim that animals so treated are "protected from the effects of future snake bites." They hope to see their plan adopted in India end elsewhere where venomous snakes abound.

Notes

VETERINARY APPOINTMENT. — Mr. Sidney Villar, F.R.C.V.S., has been appointed by the Government of New South Wales as their Veterinary Surgeon, to examine and grant certificates of health for all stock shipped from London to New South Wales.

VETERINARY LECTURE AT HEMINGTON.—On Thursday Mr. R. M. Mallock delivered the last of a series of ten lectures on veterinary science in the schoolroom at Hemington. His subject was, "How to examine a horse or cow previous to purchase." The attendance at all the lectures has been remarkably good.

CORRESPONDENCE.

DISHORNING CALVES.

DEAR SIR,

I have been asked to dishorn some calves, and will be pleased if through the columns of your valuable *Record* some fellow practitioner, practically acquainted with the operation, will describe how it is done and what instrument or instruments are used; also at what age is the operation best performed with least pain to the animal?

Can you, Mr. Editor, express an opinion as to the legality of the operation *in calves*? Being wholly unacquainted with the *modus operandi*, I trust some good natured gentleman will enlighten my darkness.

Thanking you in anticipation for the insertion of this letter, I subscribe myself

A YOUNG PRACTITIONER.

THE PROPOSED ALTERATION IN THE BYE-LAWS.

SIR,

In your strictures on the motions brought forward by myself, and carried at the last meeting of Council, in your issue of the 3rd inst., there are one or two statements which I cannot allow to pass without comment. In the first place you assert, "that when hands are too busy they may find some mischief still to do." May I ask, sir, what mischief can possibly be done by such motions as those in question? or in what way the work done by the Council, my work, according to your showing is, "altogether bad?" Fortunately, notwithstanding the editorial "we," the opinion expressed is that if *one* individual and that the opinion of this individual is not *altogether free from defect* is shown by the statement, that "the new rule may suit the interests of the schools and a few rejected students." May I ask in what way such a rule may suit the interests of the schools? If, as some charitably suppose, the interests of the schools is best served by those connected with them doing all in their power to retain students for an indefinite period, and thereby adding to their gains in the matter of drawing extra fees, then have I, for one, mistaken my vocation. May I again ask, Mr. Editor, from what source has originated in recent years all movements for the purpose of ensuring a thorough education? Not from *individual* members of Council, nor from editors of periodicals—at least, I think, I am correct in saying so. As to the interests of a few rejected students, does Mr. Editor know of no instance in which there was *prima facie* evidence to show that students are sometimes rejected who do not deserve to be rejected?

An implied charge again occurs in the paragraph "The votes by which it was carried included those of four teachers." May I put another question and ask who are better qualified as judges in reference to such matters than are teachers?

I observe in the report of the proceedings of the Council that Mr. Hunting sneers at, and attempts to belittle, the value of "a principal's certificate," and he adds that it is "the solitary guarantee that a student has been educated at all." May I ask that gentleman, through your columns, what guarantee the Council has had in the past that students have been educated before they have been allowed to present themselves for examination?

In the motions brought forward by myself concessions were asked which are granted by the governing bodies of institutions of at least equal importance with the R.C.V.S.—and much more than these—and I am not aware that those institutions has as yet wrecked the best interests of the profession over whose concerns they

preside. Perhaps, owing to my limited mental capacity, I did not succeed in conveying to a being endowed with much higher mental powers, the true meaning or aim of the motions I brought forward, if so I can only express unalloyed regret, and trust that as I grow older my mental faculties may grow stronger.—I am, your obedient servant,

February 7th. THOMAS WALLEY.

AN EXPLANATION.

SIR,

I think it is time to put in a few words of explanation and remonstrance with regard to charges brought against me at the South Durham and North Yorkshire Veterinary Medical Society, and which were published in *The Record* of January 20th, and I see by your last issue are creating such a stir among some of the members of Council.

To make it readable I might give my experience of these events since starting practice.

I obtained my diploma in May, 1891, and started on my own account in September, purchasing the nucleus of a small practice. There were two other professional men in the town, say A and B. A, who has been here some ten years, having purchased what was then a first-class all-round practice, and B was doing well. Since my start I cannot say I have ever met with any of that "professional friendly feeling" so much advocated and talked about from A, but was on good terms with B, who unfortunately died soon after, with his successor, and with other veterinary surgeons in neighbouring districts, and am so now.

At our meeting on December 15th A suddenly springs these three charges (so-called) on me without any previous notice, and with such a great amount of temper that not only surprised me but all members present. I gave explanations, which were not put in the minutes or published, the charges were, and in the blackest fashion.

The first, "that of blowing a horn when driving through the villages as a means of advertising himself" is not only frivolous but a falsehood. I started two branches in villages six miles away, attend once a week to each, from 8 to 9 in the morning, leave home about seven. Find it dull driving, so a week or two later borrowed a coach horn (being still capable of amusement) and *tried* to learn it, never blew one before in my life, and at the present time if I did so should get locked up for creating a disturbance if a policeman was near. *I never blew it through a village*, and as to advertising myself, there was no intention to do so, or I should be continuing now. This was back in August, and the "charge" is brought in December. I tired of my amusement after two or three trials, and have given it up.

The second, "cutting down contracts by tendering for a lower sum than his professional brethren in the town," is likewise untrue, in that B's successor and myself were the same—and A knew it. A and B had both held the contract in turns, but A won't hear of me having mine; when prices would have been kept up. A says all should tender alike and leave it to the Corporation and influence to decide. In my student days I remember an expression "What price me," you may perhaps understand it. I get the contract and A is furious, declares he will do it for half next time, and if I do it for quarter he will do it for nothing. I implored him not to upset himself, but he refused to be comforted.

Nonsense apart, I think this question is not one for discussion, unless the tender is ridiculously low (mine was not) as every man ought to be the best judge of his own business.

The third and last, "by having a stand or stall in the market for the purpose of taking orders and selling medicines," may be considered seriously. The statement as to stands gives you and others the idea of the quack medicine man, and of course you would be bound to think the worst of it. It is a desk, one yard square and two-feet-six high, in the Corn Exchange, a room which is only open for one hour every market day from 12 to 1, and there are about 20 other desks there.

My reason for starting it was that I was quizzed by my farmer friends that I could not supply first aid medicines like some medicine firms we know of. At the Christmas show I took a desk and made an exhibit in the room, other firms doing the same, for the purpose of convincing my clients, and, I honestly say, as an advertisement, but with no intention of continuing it after that day. *Nothing was taken away from that desk while the market was on*, and medicines that were required were sent direct from my own house. Well, unhappily for me A comes in and stumbles across my novelty, gets purple and unsettled for business, and makes some rash vows, but not to me, when I could have explained and set his mind at rest with regard to the future. He takes it in bad part and exceedingly "bad form" as I have before stated, surprising everybody. This nettled me, and I decided to keep my desk on for the purpose of receipting bills and meeting my clients, and not to exhibit. To his credit I may say that he apologised to me personally a week later for his "manner" of bringing it forward, this I don't think he would have done if he had had a firm belief in all his statements, or thought me anything but a gentleman.

All this explanation was given at the meeting, and much bother would have been saved if it had been reported by a reporter *correctly*, and not by the secretary, who may be a little deaf.

I have had a great respect for the heads of our profession who so "generously" were proposing various methods for my reformation, having only heard one side of the question. "Where a member of the profession publicly sells and dispenses medicines in the market place and blows a horn to attract the public." Is that truth? I should be pleased if I could get the gentleman's name who told you that, Professor McFadyean!

I think the fairest thing would be to leave your discussions over till after the next meeting of the Society when it will come up in "order." I had not troubled myself about the matter, barring writing the secretary to explain his erroneous report, till I saw the account of the Council's quarterly meeting, when the members were getting so bloodthirsty that I have had to stir myself.

I enclose my card, but as no names have been mentioned up to the present I will not sign myself, also you are at perfect liberty to give my name to whoever may desire it.

MISUNDERSTOOD.

[This and the preceding letter were crowded out last week.]

NATIONAL VETERINARY BENEVOLENT AND DEFENCE SOCIETY.—A CORRECTION.

Mr. Greaves asks us to note an error in the list of subscribers. The name A. S. Gibbins should read ALEX. L. GIBSON, (of Birmingham). He adds "I am very sorry indeed the mistake has been made; Mr. Gibson is one of our oldest and most punctual subscribers."

COMMUNICATIONS, BOOKS, AND PAPERS RECEIVED:—Capt. F. Smith, Messrs. G. Jones, J. Fraser, J. Barr, R. Over, J. J. Crowhurst, J. E. Miller, W. S. Buckley, H. Sessions, T. Greaves, T. Hopkin, E. W. Hoare, "American Vety. Review," "Agricultural Journal of Cape Colony."